

### **REMARKS/ARGUMENTS**

Applicant has carefully reviewed the Examiner's Office Action dated May 20, 2005, in which the Examiner rejected claims 1-2 under 35 U.S.C. 102(b) as being anticipated by Luo (US 6,486,739) and claims 1-5 under 35 U.S.C. 102(e) as being anticipated by Liwinski (US 6,515,546).

#### **Amendments to the Claims**

Claim 1 has been amended to overcome 102 rejections; and claims 2 and 4 have been cancelled.

#### **Claim Rejections under 35 U.S.C. 102**

The rejection of claims 1-2 under 35 USC 102(b) in view of USPN 6,486,739(Luo) and the rejection of claims 1-5 under 35 USC 102(e) in view of USPN 6,515,546(Liwinski) are respectfully traversed on the grounds that Luo and Liwinski fail to disclose or suggest an amplifier module as recited in claim 1, wherein:

- 1) the amplifier module includes an amplifier circuit for amplifying an input signal to generate an output signal and an adaptive bias circuit for receiving the input signal to provide a driving current to the amplifier circuit for controlling a quiescent current of the amplifier circuit;
- 2) the adaptive bias circuit includes a driving transistor for receiving a driving transistor input current to provide the driving current to the amplifier circuit, a drawing transistor for drawing a bypass current from the driving transistor input current to reduce the driving current in response to the input signal and an adjusting transistor for receiving the input signal to adjust a control voltage in response to the input signal;

- 3) the drawing transistor is connected to the base of the driving transistor; and
- 4) the bypass current increases when the control voltage increase.

In contrast to the claimed invention, Luo discloses a bias circuit using an enhanced Wilson current mirror biasing scheme. Although there is a drawing transistor Q2, it is connected to the emitter of the driving transistor Q3, and not to the base of the driving transistor, as claimed. Further, the bias circuit in Luo does not include an adjusting transistor for receiving the input signal to adjust a control voltage in response to the input signal. Therefore, Luo clearly does not disclose or suggest the amplifier module of the present invention.

Liwinski, on the other hand, discloses a bias circuit that can be used with low-voltage power supply for an amplifier circuit. In the disclosure of Liwinski, if the voltage at the base of transistor Q4 (which corresponds the control voltage of the present invention) increases, the collector-emitter current through transistor Q4 also increases. This causes the voltage at the base of transistor Q5 to decrease, in turn causing the current through the collector of the transistor Q5 (which corresponds the bypass current of the present invention) to decrease. As a result, in Liwinski, **the bypass current decreases when the control voltage increases**. Therefore, the operation of the bias circuit in Liwinski is **opposite** to that of the present invention.

Accordingly, Luo and Liwinski do not disclose the amplifier module of claim 1. Therefore, it is respectfully submitted that claim 1 of the present invention define a patentable invention over Luo and Liwinski; and are therefore allowable.

It is also believed that claims 3 and 6-8 directly or indirectly depending on amended claim 1, are allowable for the same reasons indicated with respect to the claim 1, and further because of the additional features recited therein which, when taken alone and/or in combination with the features recited in claim 1, remove the invention defined therein further from the disclosures made in the cited references.

### CONCLUSION

Applicants believe that this is a full and complete response to the Office Action. For the reasons discussed above, applicants now respectfully submit that all of the pending claims are in complete condition for allowance. Accordingly, it is respectfully requested that the Examiner's rejections be withdrawn; and that claims 1, 3 and 6-8 be allowed in their present form.

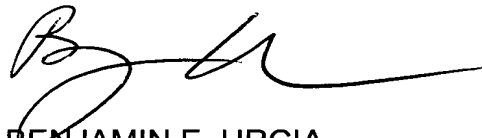
Should the Examiner require or consider it advisable that the specification, claims an/or drawings be further amended or corrected in formal respects, in order to place the case in condition for final allowance, then it is respectfully requested that such amendment or correction be carried out by Examiner's Amendment and the case be passed to issue.

Alternatively, should the Examiner feel that a personal discussion might be helpful in advancing this case to allowance, the Examiner is invited to telephone the undersigned.

Appl. No. 10/762,185  
Amendment dated  
Reply to OA of May 20, 2005

Alternatively, should the Examiner feel that a personal discussion might be helpful in advancing this case to allowance, the Examiner is invited to telephone the undersigned.

Respectfully submitted,  
BACON & THOMAS, PLLC

A handwritten signature in black ink, appearing to read 'B. Urcia', with a long horizontal flourish extending to the right.

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